

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

Claims 1-4. (Canceled)

Claim 5. (Original): A method for determining the sensitivity of a proliferative disease in a subject to treatment with an mTOR inhibitor, comprising determining the level of expression and/or phosphorylation state of S6 in a sample derived from the subject.

Claim 6. (Currently amended): A method ~~or use according to any preceding claim 5~~, wherein the proliferative disease comprises a cancer.

Claim 7. (Currently amended): A method ~~or use according to any preceding claim 5~~, wherein the mTOR inhibitor comprises rapamycin or a rapamycin derivative.

Claim 8. (Currently amended): A method ~~or use according to claim 7~~, wherein the rapamycin derivative comprises 40-O-(2-hydroxyethyl) rapamycin.

Claim 9. (Currently amended): A method according to ~~any of claims 4 to 8~~ claim 5, comprising determining the level of expression of phosphorylated S6 protein.

Claim 10. (Currently amended): A method according to ~~any of claims 4 to 9~~ claim 5, wherein the sample is derived from a tumor in the subject.

Claim 11. (Currently amended): A method according to ~~any of claims 4 to 10~~ claim 5, wherein increased expression of phosphorylated S6 relative to control is predictive of sensitivity of the proliferative disease to treatment with the mTOR inhibitor.

Claim 12. (Currently amended): A method of selecting subjects suffering from a proliferative disease for treatment with an mTOR inhibitor, comprising determining the sensitivity of the proliferative disease to treatment with an mTOR inhibitor in each subject by a method as described in ~~any of claims 4 to 10~~ claim 5, and selecting those subjects showing increased expression of phosphorylated S6 for treatment with an mTOR inhibitor.

Claim 13. (Currently amended): A method of treating a proliferative disease in a subject in need thereof, comprising determining the level of expression of phosphorylated S6 in a sample derived from the subject, by a method as described in ~~any of claims 4 to 11~~ claim 5, and treating the subject with an mTOR inhibitor if the level of expression of phosphorylated S6 is elevated.